

## INDEX

MONTHS	PAGES	MONTHS	PAGES	MONTHS	PAGES
January .....	1—42	May .....	167—206	September .....	327—366
February .....	43—84	June .....	207—246	October .....	367—406
March .....	85—126	July .....	247—286	November .....	407—454
April .....	127—166	August .....	287—326	Extra Issue .....	455—502
				December .....	503—542

	PAGE		PAGE		PAGE
<b>ACCELERATION, Performance</b>		<b>Blowers:</b>		<b>Book Reviews—Continued</b>	
Prediction (J. R. Ellis) .....	117	Improving Efficiency, Hanomag		"Geschichte des Diesel Person-	
Accident Casualties .....	210	(pat. spec.) .....	84	enwagens, Die" (The History	
Adhesive for Bonding Plastics to		Positive Displacement, Auto		of the Diesel Private Car) .....	529
Metal and Rubber, Hydropol	81	Union (pat. spec.) .....	366	"History and Development of	
Aerodynamics, Car (G. E. Lind		B.M.C. Engine Replacement Plant	402	Light Cars, The" (C. F.	
Walker) .....	215, 262	Bodies, Welding Austin-Healey Car	100	Caunter) .....	396
Aerodynamic Drag (R. M. Ogor-		Body Mounting .....	86	"How to Get Ahead in the Auto-	
kiewicz) .....	397	Bodywork:		motive Business" (W. H.	
Aerodynamics and Stability (Editor-		American .....	222	Crouse) .....	395
ial) .....	207	Commercial Vehicle Exhibition,		"How to Write Scientific and	
Air-conditioning, Commercial Ve-		Review of .....	447	Technical Papers" (S. F. Tre-	
hicle Exhibition Review of .....	447	Motor Show, Review of .....	504	lease) .....	396
Air-cooled Cylinder Construction,		Bogie Truck, Powell Pallet-handling	106	"Hydraulic Handbook" .....	295
Stihl (pat. spec.) .....	326	Bolt, Avdel Lockbolt .....	357	"Kräfte in Einrichtungen zur	
Air-cooled Engine, Panhard Dyna	128	Bolt-heading Machine, Hatebur		Verbindung von Kraftfahrzeu-	
Air Cooling for Cars (A. S. Lam-		Progressive Cold-heading .....	336	gen mit Einachsanhängern	
burn) .....	306	Bonding Plastics to Metal and Rub-		Über 20 km/h Höchst-	
Air Flow, Testing, Car Aerody-		ber, Hydropol .....	81	geschwindigkeit." (Forces in	
namics (G. E. Lind Walker) 215,	262	<b>Book Reviews:</b>		the Couplings between Motor	
Airide Springs .....	208	"A and B Roads Motoring Atlas		Vehicles and Single-axle Trail-	
Airlock Tube, Pirelli .....	261	of Great Britain" .....	296	ers Operated at Maximum	
Air Suspension Damping (Editorial)	167	"Advanced Pattern Making"		Speeds of more than 20 k.p.h.)	
Air Suspension, Dunlop .....	168	(L. L. Cox) .....	296	Deutsche Kraftfahrtforschung	
Air Suspension for Semi-Trailers,		"Autocar Road Tests 1958" .....	296	No. 112 .....	231
Cranes .....	139	"Automobile Brakes and Brake		"Kräfte in Errichtungen zur	
Air Suspension on the Continent ..	2	Testing" (M. Platt) .....	396	Verbindung von Kraftfahrzeu-	
Air Suspension Spring, General		"Automobile Electrical Equip-		gen mit Mehrachsanhängern	
Motors (pat. spec.) .....	84	ment" (A. P. Young and L.		über 20 km/hr Höchstgesch-	
Aluminium Alloy Bearings .....	211	Griffiths) .....	396	windigkeit." (Forces in Coup-	
American and British Productivity		"Automobile Engine Overhaul"		plings between Motorcars and	
(Editorial) .....	43	(A. W. Judge) .....	296	Trailers at Speeds over 20 km/	
American Bodywork .....	222	"British Engineers' Association		hr.) No. 113 .....	528
American Design Outlook .....	394	Handbook" .....	294	"Kräfte in Kugelgelenk-Flächen-	
Anti-skid Device, Dunlop Maxaret	248, 382	"CABMA Register of British In-		kupplungen bei Omnibuszügen	
Austin Gipsy .....	328, 368	dustrial Products for Canada,		mit Zweichsanhängern." No.	
Austin-Healey Car Bodies, Weld-		1958-1959" .....	395	114 (Forces in Ball-and-Socket	
ing .....	100	"Car Driving as an Art"		Flat Face Couplings between	
Automatic Machine Control .....	58	(S. C. H. Davis) .....	116	Buses and Four-wheel Trailers)	
Automatic Regulation of Valve Lift,		"Casting in Steel" .....	259	"Landing Gear Design" (H. G.	
Daimler-Benz (pat. spec.) .....	42	"Commercial Vehicle, and Trac-		Conway) .....	396
Automatic Transmission, Borg-		tor Wiring Diagrams" (E.		"Mechanical Vibrations" (A. H.	
Warner .....	532	Mulloy and J. Seale) .....	396	Church) .....	296
Automation Techniques at Ford		"Entwicklungsprobleme der		"Mechanical World Electrical	
Engine Plant, Lima, Ohio ..	533	Kraftfahrzeugmotoren." (De-		Year Book, 1958" .....	116
"Auto-Moly" Engine Lubrication		velopment Problems of Ve-		"Mechanical World Year Book,	
Compound .....	19	hicle Engines.) (A. Jante) ..	528	1958" .....	116
Avdel Lockbolt .....	357	"Entwicklung von Verfahren und		"Metal Industry Handbook and	
Axle, Final Drive Arrangement,		Geräten zur Prüfung Licht-		Directory 1958" .....	295
David Brown .....	126	technischer Einrichtungen an		"Miles per Quart + " (J. M.	
Axle Lubrication, Castor Oil ....	340	Kraftfahrzeugen sowie Un-		Nuttall) .....	295
		tersuchungen zur Ergänzung		"Motor Vehicle Exercises in Cal-	
<b>BALANCING Engines, Ford ..</b>	38	der bestehenden Prüfvorschrift-		culation" (H. G. Miles and	
Barrelling, Precision .....	536	en" (Development of Pro-		L. W. F. Elen) .....	395
Barrel, Rubber Rumbling, Dunlop		cedures and Equipment for the		"Motor Vehicle, The" (K. New-	
(pat. spec.) .....	406	Testing of Lamps and Illumin-		ton and W. Steeds) .....	395
Batch Counter and Timer .....	325	ated Signals for Motor Ve-		"Plastics Progress 1957" (Ed. P.	
Batching Plant, Mechanized Heat		hicles, and also Research lead-		Morgan) .....	259
Treatment .....	362	ing to the Completion of Test		"Proceedings of the International	
<b>Bearings:</b>		Specifications) .....	39	Conference on Fatigue of	
Aluminium Alloy .....	211	"Extrusion of Plastics" (E. G.		Metals, 1956" .....	395
Clayflex Flexible .....	255	Fisher) .....	295	"Prüfung von Dauerbremsen an	
Mounting Anti-Friction .....	515	"Fahrzeugtechnik. Anpassung		Kraftfahrzeuganhängern." (The	
Nadella Needle Thrust .....	392	des Fahrzeugs an den Men-		Testing of Continuously	
Belt, R.K.N. Safety .....	21	schen." (Vehicle Engineering.		Applied Brakes for Trailers).	
Bench for Servicing Fuel Injectors,		The Fitting of Vehicles to the		Deutsche Kraftfahrtforschung	
Hartridge .....	360	Human Being) .....	147	No. 104 .....	231
		"Ford Cars" (T. B. D. Service)	295		

## INDEX

MONTHS	PAGES	MONTHS	PAGES	MONTHS	PAGES
January .....	1—42	May .....	167—206	September .....	327—366
February .....	43—84	June .....	207—246	October .....	367—406
March .....	85—126	July .....	247—286	November .....	407—454
April .....	127—166	August .....	287—326	Extra Issue .....	455—502
				December .....	503—542

	PAGE		PAGE		PAGE
<b>ACCELERATION, Performance</b>		<b>Blowers:</b>		<b>Book Reviews—Continued</b>	
Prediction (J. R. Ellis) .....	117	Improving Efficiency, Hanomag		"Geschichte des Diesel Person-	
Accident Casualties .....	210	(pat. spec.) .....	84	enwagens, Die" (The History	
Adhesive for Bonding Plastics to		Positive Displacement, Auto		of the Diesel Private Car) ....	529
Metal and Rubber, Hydropol	81	Union (pat. spec.) .....	366	"History and Development of	
Aerodynamics, Car (G. E. Lind		B.M.C. Engine Replacement Plant	402	Light Cars, The" (C. F.	
Walker) .....	215, 262	Bodies, Welding Austin-Healey Car	100	Caunter) .....	396
Aerodynamic Drag (R. M. Ogor-		Body Mounting .....	86	"How to Get Ahead in the Auto-	
kiewicz) .....	397	Bodywork:		motive Business" (W. H.	
Aerodynamics and Stability (Editor-		American .....	222	Crouse) .....	395
ial) .....	207	Commercial Vehicle Exhibition,		"How to Write Scientific and	
Air-conditioning, Commercial Ve-		Review of .....	447	Technical Papers" (S. F. Tre-	
hicle Exhibition Review of .....	447	Motor Show, Review of .....	504	lease) .....	396
Air-cooled Cylinder Construction,		Bogie Truck, Powell Pallet-handling	106	"Hydraulic Handbook" .....	295
Stihl (pat. spec.) .....	326	Bolt, Avdel Lockbolt .....	357	"Kräfte in Einrichtungen zur	
Air-cooled Engine, Panhard Dyna	128	Bolt-heading Machine, Hatebur		Verbindung von Kraftfahrzeu-	
Air Cooling for Cars (A. S. Lam-		Progressive Cold-heading .....	336	gen mit Einachsanhängern	
burn) .....	306	Bonding Plastics to Metal and Rub-		Über 20 km/h Höchst-	
Air Flow, Testing, Car Aerody-		ber, Hydropol .....	81	geschwindigkeit." (Forces in	
namics (G. E. Lind Walker) 215,	262	<b>Book Reviews:</b>		the Couplings between Motor	
Airide Springs .....	208	"A and B Roads Motoring Atlas		Vehicles and Single-axle Trail-	
Airlock Tube, Pirelli .....	261	of Great Britain" .....	296	ers Operated at Maximum	
Air Suspension Damping (Editorial)	167	"Advanced Pattern Making"		Speeds of more than 20 k.p.h.)	
Air Suspension, Dunlop .....	168	(L. L. Cox) .....	296	Deutsche Kraftfahrtforschung	
Air Suspension for Semi-Trailers,		"Autocar Road Tests 1958" ....	296	No. 112 .....	231
Cranes .....	139	"Automobile Brakes and Brake		"Kräfte in Errichtungen zur	
Air Suspension on the Continent ..	2	Testing" (M. Platt) .....	396	Verbindung von Kraftfahrzeu-	
Air Suspension Spring, General		"Automobile Electrical Equip-		gen mit Mehrachsanhängern	
Motors (pat. spec.) .....	84	ment" (A. P. Young and L.		über 20 km/hr Höchstgesch-	
Aluminium Alloy Bearings .....	211	Griffiths) .....	396	windigkeit." (Forces in Coup-	
American and British Productivity		"Automobile Engine Overhaul"		plings between Motorcars and	
(Editorial) .....	43	(A. W. Judge) .....	296	Trailers at Speeds over 20 km/	
American Bodywork .....	222	"British Engineers' Association		hr.) No. 113 .....	528
American Design Outlook .....	394	Handbook" .....	294	"Kräfte in Kugelgelenk-Flächen-	
Anti-skid Device, Dunlop Maxaret	248,	"CABMA Register of British In-		kupplungen bei Omnibuszügen	
328,	368	dustrial Products for Canada,		mit Zweichsanhängern." No.	
Austin Gipsy .....	328,	1958-1959" .....	395	114 (Forces in Ball-and-Socket	
Austin-Healey Car Bodies, Weld-		"Car Driving as an Art"		Flat Face Couplings between	
ing .....	100	(S. C. H. Davis) .....	116	Buses and Four-wheel Trailers)	
Automatic Machine Control .....	58	"Casting in Steel" .....	259	"Landing Gear Design" (H. G.	
Automatic Regulation of Valve Lift,		"Commercial Vehicle, and Trac-		Conway) .....	396
Daimler-Benz (pat. spec.) .....	42	tor Wiring Diagrams" (E.		"Mechanical Vibrations" (A. H.	
Automatic Transmission, Borg-		Mulloy and J. Seale) .....	396	Church) .....	296
Warner .....	532	"Entwicklungsprobleme der		"Mechanical World Electrical	
Automation Techniques at Ford		Kraftfahrzeugmotoren." (De-		Year Book, 1958" .....	116
Engine Plant, Lima, Ohio ..	533	velopment Problems of Ve-		"Mechanical World Year Book,	
"Auto-Moly" Engine Lubrication		hicle Engines.) (A. Jante) ..	528	1958" .....	116
Compound .....	19	"Entwicklung von Verfahren und		"Metal Industry Handbook and	
Avdel Lockbolt .....	357	Geräten zur Prüfung Licht-		Directory 1958" .....	295
Axle, Final Drive Arrangement,		technischer Einrichtungen an		"Miles per Quart + " (J. M.	
David Brown .....	126	Kraftfahrzeugen sowie Un-		Nuttall) .....	295
Axle Lubrication, Castor Oil ....	340	tersuchungen zur Ergänzung		"Motor Vehicle Exercises in Cal-	
		der bestehenden Prüfvorschrift-		culation" (H. G. Miles and	
<b>BALANCING Engines, Ford ..</b>	38	en" (Development of Pro-		L. W. F. Elen) .....	395
Barrelling, Precision .....	536	cedures and Equipment for the		"Motor Vehicle, The" (K. New-	
Barrel, Rubber Rumbling, Dunlop		Testing of Lamps and Illumin-		ton and W. Steeds) .....	395
(pat. spec.) .....	406	ated Signals for Motor Ve-		"Plastics Progress 1957" (Ed. P.	
Batch Counter and Timer .....	325	hicles, and also Research lead-		Morgan) .....	259
Batching Plant, Mechanized Heat		ing to the Completion of Test		"Proceedings of the International	
Treatment .....	362	Specifications) .....	39	Conference on Fatigue of	
<b>Bearings:</b>		"Extrusion of Plastics" (E. G.		Metals, 1956" .....	395
Aluminium Alloy .....	211	Fisher) .....	295	"Prüfung von Dauerbremsen an	
Clayflex Flexible .....	255	"Fahrzeugtechnik. Anpassung		Kraftfahrzeuganhängern." (The	
Mounting Anti-Friction .....	515	des Fahrzeugs an den Men-		Testing of Continuously	
Nadella Needle Thrust .....	392	schen." (Vehicle Engineering.		Applied Brakes for Trailers).	
Belt, R.K.N. Safety .....	21	The Fitting of Vehicles to the		Deutsche Kraftfahrtforschung	
Bench for Servicing Fuel Injectors,		Human Being) .....	147	No. 104 .....	231
Hartridge .....	360	"Ford Cars" (T. B. D. Service)	295		

	PAGE		PAGE		PAGE
<b>Book Reviews—Continued</b>		<b>Book Reviews—Continued</b>		<b>Collets:</b>	
"Servicing Guide to British Motor Vehicles." Vol. IV. (A. J. K. Moss) .....	116	"Versuche an Zügen mit Selbst-tätiger Lastanpassung der Anhängerebremsen zur Ermittlung von Kennwerten für die Unmittenbare Bremsprüfung." (Tests with Trains with Automatic Load Adjustment of Trailer Brakes to Determine the Characteristics of Direct Brake Tests). Deutsche Kraft-fahrtforschung No. 101 .....	39	Crawford Multibore .....	136
"Sixth Symposium (International) on Combustion" .....	295	"Vom Motor zum Auto, Fünf Männer und ihr Werk," (From Engine to the Car, Five Men and their Work.) (E. Diesel) ..	529	"Multisize" Precision .....	15
"Standards for the British Auto-mobile Industry" .....	197	"W.O." (W. O. Bentley) .....	296	Combined Shoe and Disc Brake, Bendix (pat. spec.) .....	365
"Teoria, Konstrukcija, Raschet i Ispitanie Dvigatel' Vnutrenego Sgorania (Theory, Design, Calculation and Testing of Internal Combustion Engines) ..	40	Books, Exhibition of Motoring ..	294	Combustion Chamber, Daimler-Benz Diesel Engine (pat. spec.) ..	206
"Trouble-Free Hydraulics" (I. McNeil) .....	259	Boring Machine, Deckel Optical Co-ordinate .....	14	Combustion, Piston-crown Swirl Chamber for Diesel Engine, Steyr-Daimler-Puch (pat. spec.) ..	286
"Untersuchungen an Deichsel-kraftgeregelten Bremsen von Kraftfahrzeuganhängern." (In-vestigations concerning Draw-bar-controlled Brakes for Lorry Trailers). Deutsche Kraftfahrt-forschung No. 108 .....	232	Brake Dive, Elimination, Roll Axes (W. Steeds) .....	55	Commercial Vehicle Exhibition ..	408
"Untersuchungen an Mechan-ischen Lenkungen und Hilfs-kraftlenkungen Schwerer Kraft-fahrzeuge." (Investigations of Mechanical Steering Systems and Auxiliary Power Steering Systems of Heavy Vehicles) No. 115 .....	529	Brake Drum, Budd (pat. spec.) ..	41	Commercial Vehicle Flooring, Byatt ..	535
"Untersuchungen des Dyna-mischen Verhaltens am Kraft-fahrzeugreifen." (Investiga-tions of the Dynamic Proper-ties of Tyres). Deutsche Kraft-fahrtforschung No. 111 .....	232	Brake Hydraulic Servo Mechanism, Fodens, Ltd. (pat. spec.) .....	406	Commercial Vehicle Progress .....	407
"Untersuchung über den Einfluss der Stossdämpfer auf die Zwischen Rad und Fahrbahn Auftretenden Senkrechte Dyna-mischen Bodenkkräfte." (In-vestigations concerning the Influence of Shock Absorbers on the Dynamic Forces Occur-ring between Wheel and Road). Deutsche Kraftfahrtforschung No. 105 .....	231	Brake Linings, DON R.14 material on Austin Gipsy .....	532	Commercial Vehicles, German ..	44
"Untersuchungen über die Ablagerung von Bleiverbindungen in Verbrennungsmotoren bei Verwendung Verbleiter Kraft-stoffe." (Investigations Regarding the Deposit of Lead Com-pounds in Internal Combustion Engines). Deutsche Kraft-fahrtforschung No. 106 .....	231	Brake Relay Valve, Vacuum, Clayton Dewandre .....	146	Competition, Private Coachwork ..	355
"Untersuchungen über die Wirk-samkeit von Kotflügeln." (In-vestigations on the Effective-ness of Mudguards). Deutsche Kraftfahrtforschung No. 109 ..	231	<b>Brakes:</b>		Composite Panels of Synthetic Plastic Material, Daimler-Benz (pat. spec.) .....	365
"Untersuchungen über die Zweckmässige Führung des Auspuffrohrs bei Diesel-Kraft-fahrzeugen." (Investigations Regarding the Suitable Positioning of the Exhaust in Diesel-engined Vehicles). Deutsche Kraftfahrtforschung No. 110 .....	231	Bendix Combined Shoe and Disc Commercial Vehicle Exhibition Review of .....	434	Composite Springing .....	154
"Untersuchungen über Mehr-kreisige Druckmittelbremsen für Kraftfahrzeuge." (Investi-gations of Multi-Circuit Pres-sure Actuated Brakes for Road Vehicles.) Deutsche Kraft-fahrtforschung No. 102. ....	39	DAF Hydro-Pneumatic System ..	77	Continental Coachwork .....	177
"Vergleich Zwischen Benz-pyrenegehalt und Rauchdichte bei Zweitakt und Viertakt-Dieselmotoren." (Comparison between Benzpyrene Content and Smoke Density of Two-and Four-stroke Diesel Engines) ..	147	Disc, Teves (pat. spec.) .....	326	Control System for Machine Tools, Numericord Data .....	37
		Liquid-cooled, General Motors (pat. spec.) .....	541	Control System, Hancock Tele-control .....	321
		Lockheed Power .....	341	Coolant Pumps .....	294
		Motor Show Review of .....	495	Cooling Air Inlet, Volkswagenwerk (pat. spec.) .....	41
		Rippon Zero Lag Vacuum .....	523	Cooling for Cars, Interior (A. S. Lamburn) .....	306
		Water-cooled .....	523	Corroless Priming Paint .....	313
		Zero Lag System, Rippon .....	356	Corrosion Resistant Priming Paint ..	313
		Braking, Exhaust, Daimler-Benz (pat. spec.) .....	542	Coupling, Hose, "Free-end" Nylon ..	60
		Braking, Maxaret Anti-locking Device .....	382	Couplings, Semi-Trailer (H. C. Rippon) .....	314
		British and American Productivity (Editorial) .....	43	Counter and Timer, Batch .....	325
		British Engineers' Association Hand-book .....	294	Counterbalanced Push Travel Truck ..	20
		British Standards, New .....	514	Counterweights for Disc Crank-shafts, Demountable, M.A.N. (pat. spec.) .....	365
		Brown, David, 557A Gearbox .....	288	Crankshaft Counterweights, De-mountable, M.A.N. (pat. spec.) ..	365
		B.R.S. Vehicles .....	345	Crankshaft Heat-treatment .....	62
		Butterworth Swing Valve .....	198	Crankshaft Turning, Wickes Trans-fer Machine .....	303
				Cromard Liners .....	305
		<b>CAPS for Brake, Clutch and Throttle Pedals .....</b>	323	Cylinder, Air-cooled, Construction, Stihl (pat. spec.) .....	326
		Car Aerodynamics (G. E. Lind Walker) .....	215, 262		
		Carbide-tipped Tools, Wickman ..	15	<b>DAF Hydro-Pneumatic Brake System .....</b>	77
		Erodosharp Re-servicing Machi-ne .....	15	Damper, Torsional Vibration, Metalastik (pat. spec.) .....	326
		Carburation and Induction, Motor Show Review of .....	468	Damper, Wheel, General Motors (pat. spec.) .....	83
		Castings, Whiteheart Malleable Iron ..	274	Damping Oscillations in Induction Pipes, Daimler-Benz (pat. spec.) ..	542
		Castor Oil for Lubrication .....	340	Data-Control System for Machine Tools, Numericord .....	37
		Centring Attachment for Lathes, HSR Centri-Vite .....	204	David Brown 557A Gearbox .....	288
		Chassis, Austin Gipsy .....	328, 368	De Havilland Cable Tester .....	400
		Chuck, Crawford Hydraulic .....	136	Demountable Counterweights for Disc Crankshafts, M.A.N. (pat. spec.) ..	365
		Cleaning Plant, Technochemie ..	104	Design, Factors Affecting Passenger Car, Aerodynamic Drag (R. M. Ogorkiewicz) ..	397
		Automatic Ultrasonic .....	104	Design, Outlook on Automobile (G. Roesch) .....	354
		<b>Clutches:</b>		Design, Passenger Car, Aerodynamic Drag (R. M. Ogorkiewicz) ..	397
		Commercial Vehicle Exhibition Review of .....	418	Die-casting Machine, Robar .....	324
		Free Wheel for Fractional Horse-power Applications .....	532	Diesel Engine Performance (M. Alperstein, W. B. Swim, P.H. Schweitzer) ..	22
		Motor Show Review of .....	478	Diesel Engine Pistons (Editorial) ..	367
		Clutch Plates, Sintered Bronze-faced .....	34	Disc Brake, Teves (pat. spec.) .....	326
		Coachwork Competition, Private ..	355	Divided Propeller Shaft, General Motors Corp. (pat. spec.) .....	166
		Coachwork, Geneva Show Review of ..	177	Dowty Synthetic Rubber Sealing Rings .....	530
		Cold Forming, Progressive .....	336	Drag, Aerodynamic (R. M. Ogorkiewicz) ..	397
		Cold-heading Machine, Hatebur ..	336	Drawing Practice, Engineering ..	399



# AUTOMOBILE ENGINEER

	PAGE
Drill, Maxam Woodpecker Auto- matically Controlled .....	105
Drill Post, Electromagnetic, Wolf-H. & S. ....	361
Dumper, Foden Heavy-Duty .....	98
Dunlop Air Suspension .....	168
Dunlop Maxaret Anti-skid Device .....	248
Dynamometers:	
English Electric, Engine .....	376
Heenan and Froude .....	82, 142
Vehicle (H. J. Eatwell, N. G. Bos- tock and J. R. Crowther) ....	297

<b>EDITORIALS:</b>	
Aerodynamics and Stability ..	207
Air Suspension Damping .....	167
British and American Produc- tivity .....	43
Commercial Vehicle Progress ..	407
Diesel Engine Pistons .....	367
Engine Development .....	127
Future Outlook, The .....	1
Lessons from the Show .....	455
Production and Design .....	85
Quality .....	287
Range of Vision .....	247
Road Safety and Design .....	327
Welfare Costs .....	503
Ejectors, Gas (A. G. Filimonov) ..	271
Electrical Equipment and Heaters, Commercial Vehicle Exhibition Review of .....	442
Electrical Equipment and Heaters, Motor Show Review of .....	498
Electrically driven Exhauster, Feeny and Johnson .....	221
Electric Motors, Brook .....	106
Electric Power-Assisted Steering, Thompson (pat. spec.) .....	84
Electrode Holders, Lincoln-Jackson Electrodes, Ferrolux Iron-Powder ..	59
Electrodes for Gouging and Pierc- ing, "Groovees" .....	360
Electromagnetic Drill Post, Wolf-H. & S. ....	106
Employee Interviewing .....	361
Engine Balancing, Ford .....	110
Engine Components, Manufacture, Vauxhall Motors, Ltd. ....	38
Engine Development (Editorial) ..	190
Engine Dynamometer, English Elec- tric .....	127
Engine Lubrication, "Auto-Moly" ..	376
Engine Performance, Diesel (M. Alperstein, W. B. Swim, P. H. Schweitzer) .....	19
Engine Replacement Plant, B.M.C. Engines:	22
Austin Gipsy .....	402
Chrysler Plymouth V-8 Manufac- ture .....	368
Commercial Vehicle Exhibition Review of .....	346
Daimler-Benz Diesel, Turbulence Chamber (pat. spec.) .....	408
Daimler-Benz Fuel-injection, Mixture - compressing (pat. spec.) .....	206
Lanova Four-stroke (pat. spec.) ..	42
Mercedes-Benz Multi-fuel ..	326
Motor Show Review of .....	210
Panhard Dyna 55 .....	456
Perkins Diesel, Manufacturing ..	128
Engine Testing, Heenan and Froude Dynamometers .....	64
Engine Testing, Newage Equipment Engineering Drawing Practice ..	82, 142
Essay Competition, Hartridge ..	12
Excess Fuel Device for Diesel En- gines, Simms .....	399
Exhauster, Electrically driven, Feeny and Johnson .....	518
Exhaust Gas Ejectors (A. G. Fili- monov) .....	95
Exhaust Purifier, Oxy-Muffler Catalytic .....	221
Exhibitions:	
Commercial Vehicle Exhibition ..	
Geneva Show .....	408
London Motor Show .....	177
Motoring Books .....	456
Expander Type Oil-Control Rings, Welworthy Duaflex .....	294
Extrusion, Impact (H. W. Byles) ..	175

	PAGE
Exhaust Gas Ejectors (A. G. Fili- monov) .....	271
Exhaust Purifier, Oxy-Muffler Catalytic .....	392
Exhibitions:	
Commercial Vehicle Exhibition ..	408
Geneva Show .....	177
London Motor Show .....	456
Motoring Books .....	294
Expander Type Oil-Control Rings, Welworthy Duaflex .....	175
Extrusion, Impact (H. W. Byles) ..	124

<b>FACTORIES:</b>	
B.M.C. Engine Replacement Plant .....	402
Chrysler Corporation, V-8 Engine Manufacture .....	346
Firth-Derihon Stampings Ltd., Mechanized Heat Treatment ..	362
Ford Engine Plant, Lima, Ohio ..	533
Ford "Thames" Foundry .....	233
Jensen Motors, Ltd., Welding Austin-Healey Car Bodies .....	100
Perkins, Ltd., F., Manufacturing Small Diesel Engines .....	64
Vauxhall Motors, Ltd., Machin- ing Mechanical Details of En- gine Components .....	190
Vauxhall Motors, Ltd., New Press Shop .....	277
Vauxhall Motors, Ltd., Production Expansion .....	159
Scottish Stamping and Engineer- ing Co., Ltd., The Crankshaft Heat-treatment .....	62
Shotton Bros., Ltd., Foundry, Malleable Iron Castings .....	316
Faster Gear Finishing .....	148
Ferrolux Iron-Powder Electrodes ..	360
Filing Machine for Non-ferrous Metals, Stanley "Discut" .....	138
Films, Shell Petroleum Co., Ltd. ..	377
Final Drive Arrangement, David Brown and Sons, Ltd. ....	126
Final Drive Units, Commercial Vehicle Exhibition Review of ..	425
Fire Extinguisher, Gwish .....	313
Firth-Derihon Stampings, Ltd., Batching Plant .....	362
Flexible Bearings, Clayflex .....	255
Flooring, Byatt Polyester-Glass Fibre .....	535
Fluid Suspension Spring, U.S. Rub- ber Co. (pat. spec.) .....	84
Foamoprene, Plastics Foam Material ..	214
Foden Heavy-duty Dumper .....	98
Ford Engine Plant, Lima, Ohio, Automation Techniques .....	533
Ford "Thames" Foundry .....	233
Foundry, Ford "Thames" .....	233
Foundry, Shotton Bros., Ltd., Con- tinuous Flow-line Production ..	316
Four-stroke Engine, Lanova (pat. spec.) .....	326
Frame, Austin Gipsy .....	333
Frames and Body Structures, Com- mercial Vehicle Review of .....	438
Free Wheel for Fractional Horse- power Applications .....	532
Fuel Consumption Measurement ..	312
Fuel Device for Diesel Engines, Excess, Simms .....	95
Fuels, Octane Numbers (K. Arter) ..	338, 381
Fuel-injection, Mixture-compress- ing Engine, Daimler-Benz (pat. spec.) .....	42
Furnaces for the Aluminium Indus- try .....	21
Future Outlook, The (Editorial) ..	1

	PAGE
<b>GAS Ejectors (A. G. Filimonov)</b> ..	271
Gearboxes:	
Austin Gipsy .....	369
Brown, David, 557A .....	288
Commercial Vehicle Exhibition Review of .....	419
Gear Finishers, Michigan 870-A ..	148
Gear Generator, Sykomatic .....	260
Gear Selector Mechanism, Hydraul- ic Actuation, David Brown (pat. spec.) .....	405
Gears:	
Resilient, Caterpillar Tractor Co. (pat. spec.) .....	542
Resiliently Cushioned, Magnien (pat. spec.) .....	126
Gearing, Overdrive, Moss Gear Co. Ltd. (pat. spec.) .....	405
German Commercial Vehicles .....	44
Grinding Attachment, Baker-Pera Tool Radius and Cutting Edge ..	135
Grinding Machines:	
Deckel Optical Co-ordinate .....	14
Neven G.F.O. Oscillating-head ..	205
Rowland Surface .....	96
"Groovees," Electrodes for Gouging and Piercing .....	106
Gwish Fire Extinguisher .....	313

<b>HANCOCK Telecontrol</b> .....	321
Handa Overdrive .....	111
Handbook of Standards .....	197
Hatebur Progressive Cold-heading Machines .....	336
Head Lining, Fisher and Ludlow (pat. spec.) .....	41
Heaters, Commercial Vehicle Exhi- bition Review of .....	442
Heat Treatment:	
Crankshaft, The Scottish Stamp- ing and Engineering Co. Ltd. Mechanized, Firth - Derihon Stampings Ltd. ....	62
Heavy-duty Dumper, Foden .....	362
Hepocrom Oil Control Ring .....	98
Hose Coupling, "Free-end", Nylon Hydraulic Actuation of Gear Selec- tor Mechanism, David Brown (pat. spec.) .....	11
Hydro-mechanical Transmission, Austin (pat. spec.) .....	60
Hydro-pneumatic Brake System, DAF .....	405
Hydro-pneumatic Front Wheel Suspension, Ford (pat. spec.) ..	406
Hydropol Adhesive for Bonding Plastics to Metal and Rubber ..	77
Impact Extrusion (H. W. Byles) ..	541
Improving Blower Efficiency, Hano- mag (pat. spec.) .....	81
Independently Sprung Front Wheel Mounting, Morris (pat. spec.) ..	84
Indicator for Lathes, Ceewrite ..	405
Industrial Purchasing .....	203
Industrial Safety Booklets .....	363
Injection Nozzle Servicing Bench, Hartridge .....	540
Inspection, BISRA Sheet Metal Lamination Detector .....	360
Institution of Production En- gineers, Paper read before: "Impact Extrusion" (H. W. Byles) .....	61
Intercooling and Turbocharging ..	124
Interior Cooling for Cars (A. S. Lamburn) .....	150
Interviewing, Employee .....	306
Iron Castings, Whiteheart Malle- able .....	110
Iron, Malleable .....	274
Iron, Malleable .....	381

# AUTOMOBILE ENGINEER

V

	PAGE		PAGE
<b>JOINTS:</b>		<b>Mounting Anti-Friction Bearings</b>	515
Hilyn Self-sealing Swivel .....	359	Multi-fuel Engines, Mercedes-Benz .....	210
Nitex Tube .....	274		
<b>LAMINATED Spring, Daimler-Benz (pat. spec.) .....</b>	<b>83</b>	<b>NADELLA Needle Thrust Bearing</b>	<b>392</b>
Laminated Torsion Bar, Volkswagenwerk (pat. spec.) .....	166	Nameplates, Millett Levens Self-Adhesive .....	149
Lamination Detector, BISRA .....	61	Needle Thrust Bearing, Nadella ..	392
Lapping Machine, Lapmaster "48" ..	203	New Plant and Tools 14, 59, 104, 135, 203, 315, .....	358
Lateral Forces on Tyres (D. H. Cooper) .....	524	New Standards, B.S.I. ....	514
Latham Supercharger .....	32	Nitex Tube Joints .....	274
<b>Lathes:</b>		Numericord Data-Control System for Machine Tools .....	37
Dubied Rapid 515 Copying ....	59	Nut-forming Machine, Hatebur Progressive Cold-heading .....	336
Vertimax Production .....	107	Nuts and Bolts .....	308
Lessons from the Show (Editorial) ..	455	<b>Nuts:</b>	
Levelling Device for Leaf Springs, Ford (pat. spec.) .....	365	Euco Hydraulic Arbor .....	359
Lift-truck, Lansing Bagnall .....	16	Self-locking Nylon, American Screw Co. (pat. spec.) .....	206
Liners, Cromard .....	305		
Liquid-cooled Brake, General Motors (pat. spec.) .....	541	<b>OCTANE Numbers (K. Arter) 338, 381</b>	
Loading Devices for Wickman Chucking Automatics .....	113	Oil, Castor, for Lubrication .....	340
Lockbolt, Avdel .....	357	Oil Control Ring, Hepocrom .....	11
Lockheed Power Brake .....	341	Optical Co-ordinate Machine, Deckel ..	14
London Show Review .....	456	Oscillations in Induction Pipes, Damping, Daimler-Benz (pat. spec.) .....	542
<b>Lubrication:</b>		Outlook on Automobile Design (G. Roesch) .....	354
Castor Oil for Bus Rear Axles ..	340	Outlook, The Future (Editorial) ..	1
Engine, "Auto-Moly" .....	19	Overdrive, Handa .....	111
<b>MACHINE Control, Automatic</b>	<b>58</b>	Overdrive Mechanism, Moss Gear Co., Ltd. (pat. spec.) .....	405
Machine Tool Rebuilding .....	337	Overhead Valve Actuating Mechanism, General Motors (pat. spec.) ..	83
Machine Tools, Numericord Data-Control System .....	37	Overhead Valve Guides, Daimler-Benz (pat. spec.) .....	166
Machine Tools, <i>see</i>		Oxy-Muffler Catalytic Exhaust Purifier .....	392
Boring Machines		<b>PAINT, Corroless Priming ....</b>	<b>313</b>
Cold-heading Machines		Pallet-handling Bogie Truck, Powell Panels, Composite, of Synthetic Plastic Material, Daimler-Benz (pat. spec.) .....	365
Drilling Machines		Panhard Dyna 55 Engine .....	128
Gear Generators		Pedal Caps .....	323
Grinding Machines		Pencil, All-Stabilo .....	323
Lapping Machines		PERA Activities in 1957 .....	74
Lathes		Performance, Diesel Engine (M. Alperstein, W. B. Swim, P. H. Schweitzer) .....	22
Milling Machines		Performance Prediction (J. R. Ellis) .....	117
Transfer Machines		Phase and Continuity Indicator ..	357
Machining Mechanical Details, Vauxhall Motors Ltd. ....	190	Piston and Connecting Rod Assembly, Klöckner-Humboldt-Deutz (pat. spec.) .....	41
Machining Piston Rings, Teves (pat. spec.) .....	366	Piston-crown Swirl Chamber for Diesel Engine, Steyr-Daimler-Puch (pat. spec.) .....	286
Malleable Iron .....	381	Piston Rings:	
Malleable Iron Castings, Shotton Bros. Ltd. New Foundry .....	316	Goetz (pat. spec.) .....	206
Manifold Tuning (E. M. Goodger and J. Hillsdon) .....	519	Machining, Teves (pat. spec.) ..	366
<b>Materials:</b>		Stellite, Hepworth and Grandage .....	375
Handling .....	153	Wellworthy Duaflex Expander Type Oil-control .....	175
Plastics Foam .....	214	Piston Ring Wear (J. H. Deterding and J. R. B. Calow) .....	378
Strength of .....	275	Pistons, Diesel Engine (Editorial) ..	367
Maxaret Anti-locking Brake Control Unit .....	248, 382	Plastic-Coated Steel, "Stelvetite" ..	17
Measurement of Piston Ring Wear (J. H. Deterding and J. R. B. Calow) .....	378	Plastics Foam .....	214
Measuring Equipment:		Plastics Suspension, Viberti-Poglioli System .....	122
Deckel Optical Co-ordinate .....	14	Pneumatic Suspension Spring, Goodyear (pat. spec.) .....	366
Electronic, for Recording Consumption of Fuel .....	312	Polyester-Glass Fibre Vehicle Flooring, Byatt .....	535
Micrometrical Wavometer .....	358		
Mechanized Heat Treatment, Firth-Derihon Stampings Ltd. ....	362	<b>"Polyorc BH" Tubing .....</b>	<b>364</b>
Metal Spraying Conference .....	270	Porosity in Welding .....	54
Micro-drilling Machine, Dumore Milling Machine: .....	16	Positive Displacement Blower, Auto Union (pat. spec.) .....	366
Donau Automatic Rack .....	137	Power-assisted Steering Gear, Citroën (pat. spec.) .....	42
Herbert No. 47V with Automatic Down-feed .....	138	Precision Barrelling, Development of New Methods and Processes by Rolls-Royce, Ltd. ....	536
Victomatic Automatic-cycle .....	204	Press Shop, Vauxhall Motors .....	277
Mistless Spray Gun, K-L .....	204	Production and Design (Editorial) ..	85
Molybdenum Disulphide, "Auto-Moly" Engine Compound ..	19	Production Expansion, Works of Vauxhall Motors, Ltd. ....	159
Motor Show .....	456	Production Research, PERA Activities in 1957 .....	74
Motors, Brook Electric .....	106	Productivity, British and American (Editorial) .....	43
		Progressive Cold Forming .....	336
		Propeller Shaft, Divided, General Motors Corp. (pat. spec.) ....	166
		Propeller Shafts and Final Drive Units .....	485
		<b>Pumps:</b>	
		Coolant .....	294
		Materials Handling, Bullows-Binks "Pogo" .....	315
		Purchasing, Industrial .....	363
		<b>QUALITY (Editorial) .....</b>	<b>287</b>
		<b>RADIOTRACERS, Application to Measurement of Piston Ring Wear (J. H. Deterding and J. R. B. Calow) .....</b>	<b>378</b>
		Range of Vision (Editorial) .....	247
		Rebuilding Machine Tools .....	337
		Research, Car Aerodynamics (G. E. Lind Walker) .....	215, 262
		Research, PERA Activities in 1957 ..	74
		Resilient Gears, Caterpillar Tractor Co. (pat. spec.) .....	542
		Resiliently Cushioned Gears, Magnien (pat. spec.) .....	126
		Reversing Mechanism for Torque-converter Transmission, Renault (pat. spec.) .....	541
		Rheostat, Vapormatic .....	108
		Ride Leveller for Leaf Springs, Ford (pat. spec.) .....	365
		<b>Rings:</b>	
		Hepocrom Oil Control .....	11
		Star Tolerance .....	13
		Rippon Vacuum Brake (H. C. Rippon) .....	356
		Road Safety and Design (Editorial) ..	327
		Road Speed Tyre, Dunlop .....	270
		Robar Die-casting Machine .....	324
		Roll Axes (W. Steeds) .....	55
		Rolls-Royce Development of Barrelling Technique .....	536
		Roots-type Blower, Improving Efficiency, Hanomag (pat. spec.) ..	84
		Rubber Engineering .....	81
		Rubber Mountings, Body .....	86
		Rubber Rumbling Barrel, Dunlop (pat. spec.) .....	406
		Rubber Springs, Aeon Hollow ....	154
		Rumbling Barrel, Rubber, Dunlop (pat. spec.) .....	406
		<b>SAFETY Belts, R.K.N. ....</b>	<b>21</b>
		<b>Safety:</b>	
		Industrial, H.M. Stationery Office Booklets .....	540
		Road, and Design (Editorial) ....	327
		Screw Threads, Unified .....	361
		Sealing Divided Wheel Rims, Goodrich (pat. spec.) .....	126
		Sealing, Simplified, Dowty Synthetic Rubber Rings .....	530
		Self-Adhesive Nameplates, Millett Levens .....	149

# AUTOMOBILE ENGINEER

	PAGE		PAGE		PAGE
Self-sealing, Swivelling Pipe Joint, Hilyn	359	Suspension—Continued		UNIFIED Screw Threads	361
Semi-Trailer Couplings (H. C. Rippon)	314	Goodyear Pneumatic Spring (pat. spec.)	366	Universal Table for Shaper, Invicta Major	359
Shell Films	377	Hydro-pneumatic Front Wheel, Ford (pat. spec.)	541	V-8 Engine Manufacture, Chrysler Plymouth	346
Shoe and Disc Brake, Combined, Bendix (pat. spec.)	365	Motor Show Review of Front	489	Vacuum Brake Relay Valve, Clayton Dewandre	146
Simplified Sealing, Dowty Synthetic Rubber Rings	530	Motor Show Review of Rear	487	Valve Actuating Mechanism, Overhead, General Motors (pat. spec.)	83
Sintered Bronze-Faced Clutch Plates	34	Plastics, Viberti-Poglioli	122	Valve Adjuster Screw, Begley (pat. spec.)	83
Skidding, Dunlop Maxaret Anti-skid Device	248, 382	Pneumide Air	168	Valve Guides, Overhead, Daimler-Benz (pat. spec.)	166
Skid Prevention (R. D. Lister and R. N. Kemp)	382	Rubber Body Mounting	86	Valve Lift, Automatic Regulation, Daimler-Benz (pat. spec.)	42
Solenoid Valve with Manual Control, Baldwin	135	Roll Axes (W. Steeds)	55	Valves:	
Speed, Maintaining Constant, Citroën (pat. spec.)	542	Viberti-Poglioli Plastics	122	Butterworth Swing	198
Speed, Performance Prediction (J. R. Ellis)	117	Swing Valve, Butterworth	198	Clayton Dewandre Vacuum Brake Relay	146
Spot-welding Electronic Timer, Argonarc	60	Sykomatic Gear Generator	260	Hard-faced, Teves (pat. spec.)	206
Spray Gun, K-L Mistless	204	TABLE, Universal, for Shaping Machine	359	"Rayon-Patent" Stop	107
Springing, Composite	154	Tapping Heads, Autal	105	Solenoid, with Manual Control, Baldwin	136
Springing Device, Auxiliary, Toledo Woodhead (pat. spec.)	365	Technical Information	518	Van, B.R.S.	345
Spurings:		Telecontrol, Hancock	321	Vapormatic Rheostat	108
Aeon Hollow Rubber	154	Testing, Car Aerodynamics (G. E. Lind Walker)	215, 262	Vauxhall Motors' New Press Shop	277
Airide	208	Testing Equipment:		Vauxhall Motors, Ltd., Production Expansion	159
Air Suspension, General Motors Corp. (pat. spec.)	84	BISRA Sheet Metal Lamination Detector	61	Vehicle Dynamometer (H. J. Eatwell, N. G. Bostock and J. R. Crowther)	297
Firestone Airide	208	British Oxygen Gases Flow-test Instrument for Oxy-acetylene Blowpipes	61	Vehicle Speed, Maintaining Constant, Citroën (pat. spec.)	542
Fluid Suspension, U.S. Rubber Co. (pat. spec.)	84	de Havilland Cable Tester	400	Vehicle Test Plant, The Associated Ethyl Co., Ltd.	142
Goodyear Pneumatic Suspension (pat. spec.)	366	English Electric Engine Dynamometer	376	Ventilated Wheel and Rim Assembly, Kelsey-Hayes (pat. spec.)	405
Laminated, Daimler-Benz (pat. spec.)	83	Heenan and Froude, Vehicle	142	Vibration Damper, Torsional, Metalastik (pat. spec.)	326
Leaf, Ride Leveller, Ford (pat. spec.)	365	Newage Engine	12	Vibration Prevention, Rubber Mountings	86
Rubber, Aeon Hollow	154	Vehicle Dynamometer (H. J. Eatwell, N. G. Bostock and J. R. Crowther)	297	Vice, Tilting and Swivelling	360
Stability and Aerodynamics (Editorial)	207	Testing Fuels, Octane Numbers (K. Arter)	338, 381	Vision, Range of (Editorial)	247
Stabilizers, Voltage	302	Testing Gas Ejectors (A. G. Filimonov)	271	Visual-record Control System, Hancock Telecontrol	321
Starter for Slip-Ring Electric Motors, Vapormatic Rheostat	108	Test Plant, Vehicle, The Associated Ethyl Co., Ltd.	142	Voltage Stabilizers	302
Star Tolerance Rings	13	Timer and Batch Counter	325	WATER-COOLED Brakes	523
Steel, Plastic-coated, "Stelvetite"	17	Tipping Gear for Articulated Vehicles, Anthony (pat. spec.)	542	Wear, Piston Ring (J. H. Deterding and J. R. B. Calow)	378
Steering:		Tolerance Rings, Star	13	Welding Austin-Healey Car Bodies	100
Austin Gipsy	334	Tool Head, Newall Universal	136	Welding Installation for Axle Casings, Automatic	202
Citroën Power-assisted (pat. spec.)	42	Torsional Vibration Damper, Metalastik (pat. spec.)	326	Welding, Porosity in	54
Commercial Vehicle Exhibition, Review of	427	Torsion Bar Front Suspension, Ford (pat. spec.)	286	Welfare Costs (Editorial)	503
Motor Show, Review of	493	Torsion Bar, Laminated, Volkswagenwerk (pat. spec.)	166	Wellworthy Duaflex Oil-Control Ring	175
Thompson Electric Power-assisted (pat. spec.)	84	Torsion Bars	404	Wheel and Rim Assembly, Ventilated, Kelsey-Hayes (pat. spec.)	405
Stellite Piston Rings	375	Trailers, Cranes Air Suspension for Semi-Trailers	139	Wheel Damper, General Motors (pat. spec.)	83
Stelvetite Plastic-coated Steel	17	Transfer Machine for Turning Crankshafts, Wickes	303	Wheel Mounting, Independently Sprung Front, Morris (pat. spec.)	405
Stop Valves, "Rayon Patent"	107	Transfer Machines, Manufacturing Perkins Small Diesel Engines	64	Wheel Rims, Sealing, Goodrich (pat. spec.)	126
Strength of Materials	275	Transformer Plug, Dohm Electran	315	Whiteheart Malleable Iron Castings	274
Supercharger, Latham	32	Transmission:		Wickman Erodosharp Machine for Re-servicing Carbide-tipped Tools	15
Surface Grinders, Rowland	96	Borg-Warner Automatic (Booklet)	532	Wind Tunnel Tests, Car Aerodynamics (G. E. Lind Walker)	215, 262
Suspension:		Handa Overdrive	111	Work-loading Devices, Wickman	113
Aeon Hollow Rubber Springs	154	Hydro-mechanical, Austin (pat. spec.)	406	Works, see Factories	
Air, Damping (Editorial)	167	Motor Show Review of	479		
Air, Dunlop Pneumide	168	Reversing Mechanism for Torque-converter, Renault (pat. spec.)	541		
Air, for Semi-Trailers, Cranes	139	Trimming Machine for Non-ferrous Metals, Stanley "Discut"	138		
Air, on the Continent	2	Truck, TPS MachinLoder	20		
Air Suspension Spring, General Motors (pat. spec.)	84	Tube Joints, Nitex	274		
Austin Gipsy	329	Tube, Pirelli Airlock	261		
Commercial Vehicle Exhibition, Review of	427	Tubing, "Polyorc BH"	364		
Cranes Air Suspension for Semi-Trailers	139	Tuning, Manifold (E. M. Goodger and J. Hillsdon)	519		
Daimler-Benz Engine and Gear Unit (pat. spec.)	286	Turbocharging and Intercooling, B.S.A. Development Work	150		
Damping, Air (Editorial)	167	Turning Crankshafts, Wickes Transfer Machine	303		
Dunlop Air	168	Tyres:			
Fluid Pressure Spring, U.S. Rubber Co. (pat. spec.)	84	Dunlop Road Speed	270		
Ford Torsion Bar Front (pat. spec.)	286	Lateral Forces on (D. H. Cooper)	524		
General Motors Air Suspension Spring (pat. spec.)	84				



## PHOTOGRAPHIC ILLUSTRATIONS OF ENGINE AND CHASSIS DETAILS

	PAGE		PAGE		PAGE
<b>A.C. Ace Independent Rear Suspension</b> .....	488	<b>DAF Belt-drive Transmission</b> ..	480	<b>KIRKSTALL 24-ton Double-drive Hypoid Twin-axle Bogie</b> .....	424
<b>A.C. Ace Transmission</b> .....	484	<b>DAF Horizontally Opposed Twin-cylinder Air-cooled Engine</b> .....	462	<b>Kirkstall Driven Front Axle</b> .....	424
<b>AC-Delco Vivid Arc Speedometer</b> .....	445	<b>DAF Trailer Brake Valve</b> .....	80		
<b>A.E.C. 11.3-litre Six-cylinder Engine</b> .....	410	<b>Daimler CD 6 Turbocharged Engine</b> .....	413	<b>LANCIA Appia Engine</b> .....	467
<b>A.E.C. Front Axle Layout</b> .....	426	<b>Daimler CVD 650-220 Power-assisted Steering</b> .....	432	<b>Lancia Flamina Induction Manifold</b> .....	471
<b>A.E.C. Maudslay Four-cylinder Engine</b> .....	410	<b>David Brown 557A Gearbox</b> .....	288	<b>Land-Rover Diesel Engine</b> .....	408
<b>A.E.C. Reliance Rear Axle</b> .....	430	<b>Dennis Loline Chassis Frame</b> .....	439	<b>Latham Supercharger on Ford Mercury Engine</b> .....	33
<b>A.E.C. Reliance Rear Suspension</b> ..	426	<b>Dunlop Air Suspension</b> .....	171	<b>Laycock-de-Normanville Overdrive Unit on Rover Car</b> .....	483
<b>Aeon Hollow Rubber Springs</b> ..	154	<b>Dunlop Disc Brake</b> .....	497	<b>Lockheed 12 in x 4 in Transmission Brake</b> .....	435
<b>Airide Springs</b> .....	209	<b>Dunlop Disc Brakes on Dyson 8-ton Four-wheel Trailer</b> .....	436	<b>Lockheed Disc Brake Assemblies</b> .....	496
<b>Alfa Romeo Double Overhead Camshaft 2000 Spider Engine</b> .....	468	<b>Dunlop Front Suspension Assembly on Jaguar Car</b> .....	491	<b>Leyland Five-speed Gearbox</b> .....	423
<b>Armstrong Siddeley Star Sapphire Engine with Two Zenith-Stromberg Downdraught Carburettors</b> .....	472	<b>Dunlop Maxaret Anti-skid Device</b> ..	250	<b>Leyland Octopus Trailing Axle</b> ..	425
<b>Aston Martin DB4 Engine</b> .....	458, 459	<b>Dunlop Pneumatic Suspension Layouts</b> .....	6	<b>Leyland Super Comet Final Drive Unit</b> .....	426
<b>Aston Martin DB4 Induction Manifold</b> .....	476	<b>Dunlop Rear Suspension System</b> ..	7	<b>Lockheed Heavy Duty Camshaft Actuated Front Wheel Brake</b> ..	434
<b>Austin A40 Two-port Induction Manifold</b> .....	473	<b>Dunlop Rear Wheel and Transmission Disc Brakes on Eaton Axle</b> .....	436	<b>Lockheed Rear Wheel Disc Brake</b> ..	437
<b>Austin Engine in Tempo Chassis</b> ..	44	<b>Dyson Trailer Air Suspension</b> .....	432	<b>Lotus Formula I Five-speed Transmission</b> .....	484
<b>Austin Gipsy Chassis</b> .....	368				
<b>Austin Gipsy Cross-country Vehicle</b> ..	334	<b>EBERSPÄCHER Turbocharger on A.E.C. Engine</b> .....	411	<b>M.A.N. 420 HOC1 Front Suspension and Steering Layout</b> .....	52
<b>Austin Gipsy Front Suspension</b> ..	331	<b>Excelsior Two-stroke Engine Installation in Berkeley Car</b> ..	457	<b>M.A.N. 420 HOC1 Rear Suspension</b> .....	52
<b>Austin Gipsy Rear Suspension</b> ..	329			<b>M.A.N. Six-cylinder Underfloor Diesel Engine</b> .....	51
<b>Austin Gipsy Steering Adjustment</b> ..	371	<b>FEENEY and Johnson Vacuum Trailer Brake Control Equipment on Land-Rover</b> .....	438	<b>Marchal Uni-Visorim Fog and Driving Lamps</b> .....	444
<b>Austin Gipsy Transmission</b> .....	372	<b>Fo-ten S-cam Air Pressure Actuated Rear Wheel Brake</b> .....	436	<b>Maxaret Anti-skid Device</b> .....	250, 383
<b>Austin-Healey 100 Six-Cylinder Head and Induction System</b> ..	474	<b>Ford Fairlane V-eight Engine</b> .....	466	<b>Meadows 6DC700 Six-cylinder 11.38 litre Engine</b> .....	415
<b>Austin-Healey Front Suspension</b> ..	490	<b>Ford Steering Damper</b> .....	47	<b>Meadows 6DCS630, 10.35 litre Engine with Holset-Schwitzer Turbocharger</b> .....	414
<b>Austin-Healey Sprite Carburettors</b> ..	470	<b>Frisky Independent Front Suspension</b> .....	489	<b>M.G. Twin Cam Engine with two S.U. Semi-downdraught Carburettors</b> .....	472
<b>Austin-Healey Sprite Rack-and-pinion Steering Unit</b> .....	494	<b>Friskysprint Engine</b> .....	467	<b>Mercedes-Benz 220SE Six-cylinder Engine</b> .....	457
<b>Austin-Healey Sprite Rear Suspension</b> ..	488			<b>Metallastik Metacone Anti-vibration Mountings on Dennis Ambulance Chassis</b> .....	92, 93
		<b>GARDNER 6LX, 10.45 litre, 150 b.h.p. Engine</b> .....	412	<b>Metallastik Metacone Mountings on Foamite Crash Tender Chassis</b> ..	91
<b>BING Single Down-draught Carburettor on NSU Prinz</b> .....	471	<b>Girling Disc Brake</b> .....	497	<b>Metzeler Front Suspension Arrangement</b> .....	8
<b>B.M.C. Engine in Austin-Healey Sprite Sports Two-seater</b> .....	461	<b>Girling Disc Brake Equipment on Guy Chassis</b> .....	437	<b>Moss Six-speed Gearbox</b> .....	483
<b>B.M.W. 600 Twin-Cylinder Air-cooled Engine</b> .....	460	<b>Girling Front Wheel Disc Brake on Triumph TR3</b> .....	495		
<b>Borg and Beck A.S. Type Clutch</b> ..	419	<b>Girling S-type Cam Actuated Rear Brake</b> .....	434	<b>NSU Prinz Front Suspension Linkage</b> .....	489
<b>Borg and Beck Clutches</b> .....	478	<b>Goggomobil 293cm<sup>3</sup> Air-cooled Engine</b> .....	417	<b>NSU Prinz Parallel Twin-cylinder Engine</b> .....	463
<b>Borg and Beck Integral Main Drive and Power Take-off Clutch</b> ..	418	<b>Goggomobil Royal Four-stroke Engine</b> .....	462	<b>NSU Prinz Rack-and-pinion Steering Unit</b> .....	493
<b>Borgward Isabella Induction System</b> .....	472	<b>Guy Victory Independent Front-wheel Suspension</b> .....	428		
<b>Brown, David 2AO Two-speed Epicyclic Auxiliary Gearbox</b> .....	420	<b>Guy Victory Rear Axle</b> .....	430	<b>PANHARD Dyna 850 cm<sup>3</sup> Engine</b> .....	132, 466
<b>Brown, David, 557A Five-speed Gearbox</b> .....	288, 289, 422			<b>Panhard Dyna 55 Engine and Gearbox</b> .....	130
<b>Butterworth Swing Valve</b> .....	198	<b>HANDA Overdrive Unit</b> .....	111, 112	<b>Panhard Dyna 55 Engine and Suspension</b> .....	129
		<b>Hands 10-ton Semi-trailer Axle with Air Springs</b> .....	431	<b>Peerless Rear Axle</b> .....	487
<b>CAM Gear Steering Unit on Frisky Chassis</b> .....	492	<b>Hillman Minx Engine</b> .....	456	<b>Perkins C305, 5 litre Underfloor Engine</b> .....	414
<b>C.A.V. Coaxial Starter Motor</b> .....	443	<b>Hobbs Mecha-Matic Transmission</b> ..	421, 423	<b>Perkins F340 Six-cylinder Engine</b> ..	414
<b>C.A.V. Four-lamp Installation on Guy Invincible</b> .....	444	<b>Humber Super Snipe 3,651 cm<sup>3</sup> Engine</b> .....	465	<b>Perkins Four 99 Engine</b> .....	416
<b>C.A.V. Type AC8, A.C. Generator</b> ..	443	<b>Humber Super Snipe Gearbox</b> ..	480	<b>Pontiac V-eight Engine</b> .....	466
<b>CEAT Air Springs</b> .....	2	<b>Humber Super Snipe Induction System</b> .....	474	<b>Primrose Third Axle Attachment on Guy Warrior Chassis</b> .....	430
<b>Chrysler 300E Four-barrel Compound Downdraught Carburettors</b> .....	470				
<b>Clayton Dewandre Reservoir Type Hydrovac Vacuum Servo</b> .....	435	<b>JAGUAR 150S Induction Manifolds</b> .....	477	<b>RELIANT 5 cwt Three-wheel Van Front Suspension</b> .....	427
<b>Commer Five-speed Gearbox</b> .....	419	<b>Jaguar Cooling Fan</b> .....	456	<b>Rover 3 Litre Engine</b> .....	464
<b>Coventry Climax Engine in Lotus Formula I Racing Car</b> .....	461	<b>Jensen Tempo 1500 Backbone Type Frame</b> .....	439	<b>Rover 3 Litre Front Suspension</b> ..	490
<b>Coventry Climax FWM Prototype Four-cylinder Engine</b> .....	461	<b>Jensen Tempo 25 cwt Truck Independent Front Suspension</b> ..	429		
<b>Cromard Liners</b> .....	305	<b>Jensen 25 cwt Truck Independent Rear Suspension</b> .....	429		
<b>Cummins NRT0-6 Turbocharged Engine</b> .....	411				

# AUTOMOBILE ENGINEER

	PAGE		PAGE		PAGE
<b>SCAMMELL</b> Heavy Duty Axle	424	Simms Manually Operated Inertia Starter for Tractors	442	<b>THORNYCROFT</b> KRN6/S, 11.3 litre Six-cylinder Engine with Simms-Eberspächer Turbo-charger	417
Scammell Six-speed Heavy Duty Gearbox	423	Simms Starter Motor	443	Triumph TR3 Induction Manifold	469
Scammell Super Construction Front Driving Axle	431	Smiths Selectroshift Transmission (sectioned)	482	<b>VIBERTI-POGIOLI</b> Suspension	122
Seddon DD8 Power-assisted Steering Installation	432	Smiths Autoselectric Transmission	481	Volvo 1,583 cm <sup>3</sup> Engine	467
Self Changing Gears Ltd. Eight-speed Gearbox	420	Smiths' Magnetic Particle Fan Coupling (sectioned)	409	<b>WESTINGHOUSE</b> Air Suspension System	10
Self Changing Gears Ltd. Four-speed Epicyclic Gearbox	421	Standard Atlas Front Suspension	428	Westinghouse Electro-pneumatic Synchronized Brake System	437
Self Changing Gears Ltd. Torque Converter	420	Standard Atlas Van Engine	415	<b>ZF</b> Hydromedia Automatic Transmission	420
		S.U. Horizontal Carburettors on Daimler Majestic	474	<b>ZF</b> Spindle Hydro-steering Unit	433
		Sunbeam Rapier 1,494 cm <sup>3</sup> Engine	465		



